

TRANSLATION

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JAPANESE PATENT SPECIFICATION

No. NS 87619/74

PROCESS FOR PRODUCTION OF PULVERULENT MALTITOL

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PATENT CLAIM

A process for production of pulverulent maltitol, which process comprises admixing to maltitol 0.1-20% by weight of a hydrophilic polymer of a molecular weight of at least 10,000, and drying the mixture.

EXAMPLES

(1) To 2 kg of a maltitol syrup (made by Nikken Kagaku K.K. under the trade name "Malbit")

Please Note—Names of Japanese firms, research laboratories and government entities, as translated, are not necessarily identical with the names adopted by such organizations for international contacts. Japanese personal and surnames often permit of several readings and the ones used in this translation are not necessarily the ones preferred by their bearers. Foreign names mentioned in Japanese specifications cannot always be accurately reconstructed.

was added 30 g of the tamarind seed gum in aqueous solution. The gum had a viscosity of 34 cp as a 1% solution at room temperature. Water was added to make 5 liters. After thoroughly homogenizing the mixture, it was spray-dried at a hot blast entry temperature of 160°C and discharge temperature of 95°C.

(2) To 2 kg of "Malbit" was added 30 g of guar gum of 1,700 cp viscosity as 1% solution (aq) at room temperature. The gum was introduced as aqueous solution and water added to make 5 liters. The mixture was spray-dried under the conditions of the preceding example.

(3) To 2 kg of "Malbit" was added 60 g of pectin dissolved in water. The pectin (trade name "Slowset") had a viscosity of 30 cp as 1% solution. Water was added to make 2.5 liters. The mixture was homogenized and dried by the froth drying method. The dried product was crushed to pulverulent form.

(4) To 2 kg "Malbit" was admixed 30 g of locust bean gum dissolved in 500 g water. The gum had a viscosity of 700 cp as 1% solution. The mixture was heated to 110°C under atmospheric pressure, with loss of water. The concentration was then continued at temperatures rising to

140°C, under reduced pressure of 600 mm Hg. The solid recovered after cooling was crushed and ground.

(5) To 2 kg of "Malbit" was added 30 g of tragacanth gum dissolved in 500 ml water. As 1% solution the gum had a viscosity of 2,100 cp at room temperature. After homogenization, the mixture was concentrated to about half its volume by heating under atmospheric pressure, followed by concentration to dryness under reducing pressure and rising temperature. The terminal conditions were 5 mm Hg/60°C. The solid recovered from the concentration was crushed and ground.

(6) To 2 kg of "Malbit" were admixed, dissolved in water, 30 g of konjak mannan flour and 15 g of lactalbumin as dispersant. The konjak mannan flour had a viscosity of 10,000 cp as 1% solution at room temperature. Water was added to make 5 liters. After homogenization, the dispersion was spray dried at a hot blast entry temperature of 160°C and exit temperature of 90°C.

(7) To 2 kg of "Malbit" were admixed, dissolved in water, 30 g of karaya gum and 7 g of the natural sweetener, glycyrrhizic acid. Water was again added to make 5 liters.

After homogenization, the solution was spray-dried under the temperature conditions of the preceding example.

(8) To 2 kg "Malbit" was admixed 30 g of carb-oxymethylcellulose as aqueous solution and more water added to make 5 liters. After homogenization the solution was spray-dried under the conditions of the preceding two examples.

(9) To 2 kg of "Malbit" was added 30 g of agar dissolved in 1 liter of hot water. The mixture was concentrated with heating to 110°C under atmospheric pressure, followed by further heating to 140°C under reduced pressure of 600 mm Hg. The solid recovered after cooling was crushed and ground.

(10) To 2 kg of "Malbit" was added 30 g of poly-(sodium acrylate) dissolved in 500 ml water. After homogenization, the mixture was concentrated by heating to 110°C under atmospheric pressure, followed by heating to 140°C under pressure of 600 mm Hg. The solid recovered after cooling was crushed and ground.

TRANSLATOR'S NOTE

The spelling of the trade name of the crude maltitol as "Malbit" is conjectural as this translator has never come across a romanized version. Possible alternative spellings would include Marbit, Marvit, etc.

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WPI Acc No: 75-00587W/197501

molitor powder from raw molitor - by pulverising with a hydrophilic org. polymer

Patent Assignee: EISAI CO LTD (EISA)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Main IPC	Week
JP 49087619	A	19740822					197501 B

Priority Applications (No Type Date): JP 734597 A 19721227

Abstract (Basic): JP 49087619 A

Raw maltitol was pulverized with addn. of 0.1-20 wt. % (based on the solid component) hydrophilic org. polymer, especially natural polysaccharide having mol. wt. of >10,000 and viscosity of >5 cp in 1% aq. soln. at room temp. In an example, reduced maltose millet jelly (2 kg) was mixed with 30 g tamarind seed polysaccharide, guar gum, pectin, arum-root powder, or carboxymethyl-cellulose etc. dissolved in H2O and the mixt. was made up to 5 l. with H2O, and pulverized by spray drying keeping inlet temp. at 160 degrees and outlet temp. at 95 degrees to give the preservable powder.

Derwent Class: D17